

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Hitoshi SAKUMA, et al.

SERIAL NO.: New Application

GAU:

FILED: Herewith

EXAMINER:

FOR: IRON-BASED CLEANING POWDER

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon

Registration No. 24,618

C. Irvin McClelland
Registration Number 21,124



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STATEMENT OF RELEVANCY

Reference AO on Form PTO-1449:

1. Japanese Pat. JP-A-11-235577 (1999)

explained in the specification

PROBLEM TO BE SOLVED: To provide a method enabling to perform a detoxicating treatment for soil contaminated with an organic chlorine compound whose object is the soil in a saturation band lower than a water level of the underground water but also the soil in an unsaturated band higher than a water level of the underground water or the dug and cut soil, relatively inexpensively with an addition of a small quantity of single iron material compared to a conventional method, in a short time and at the normal temperature.

SOLUTION: This process consists of an addition and mixing method by means of spraying iron powder as a reducing agent into the soil in the earth together with a high pressure medium or mechanically mixing by utilizing an engineering machine, etc. Preferably the iron powder incorporates ≥ 0.1 wt.% carbon, and has particle sizes whose 50 wt.% or more the carbon passes through a 150 μm filter mesh, or has ≥ 500 cm^2/g specific surface area, being added to the soil in the 0.1-10% range. Sponge like iron powder is used as the iron powder to efficiently attain the object.

Reference AP on Form PTO-1449:

2. Japanese Pat. JP-A-2001-9475 (2001)

explained in the specification

PROBLEM TO BE SOLVED: To efficiently clean underground water contaminated with organic halogen compounds in situ by burying a water-permeable reactive wall obtained by using copper-containing iron powder as a reactive agent in ground.

SOLUTION: A reactive wall 2 is obtained by incorporating copper-containing iron powder as a reactive agent by 0.1-30 wt.% into a water-permeable material. The water-permeable reactive wall 2 is installed in the downstream zone of a natural stream of underground water in a contaminated area where the area 1 contaminated with organic halogen compounds exists so that the wall 2 crosses the natural stream of the underground water. Namely the wall 2 is vertically extended till a further lower layer 4 difficult to be permeated than a water level 3 of the underground water in the contaminated area. The organic halogen compounds mixed in the underground water from the contaminated area 1 are made to pass through the wall 2 together with the underground water stream to be contacted with the copper-containing iron powder in the wall 2 and decomposed. Thereby, a size of the wall 2 can be made small and the usage of the reactive agent can be also made small.

Reference AQ on Form PTO-1449:

3. Japanese Pat. JP-A-2002-20806 (2002)

explained in the specification

PROBLEM TO BE SOLVED: To provide the optimum method in terms of production cost and contamination removing performance in a method in which halogen-containing organic contaminant is brought into reaction with iron to reductively dehalogenate and detoxicate the same.

SOLUTION: In ferrous powder metallurgy, ferrous waste such as iron powder obtainable by pulverizing a green compact below standards produced in compacting and iron powder leaked-out to the circumference of a die at the time of compacting which contain, by mass, 0.01 to 1.5% graphite and/or 0.01 to 4.0% nickel is subjected to heating treatment to produce the iron powder for removing contamination.

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 239506US0		SERIAL NO. New Application	
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Hitoshi SAKUMA, et al.			
				FILING DATE Herewith		GROUP	
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						
	AD						
	AE						
	AF						
	AG						
	AH						
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	AJ						
	AK						
	AL						
	AM						
	AN						
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO		
	AO	11-235577	8/31/99	Japan			X
	AP	2001-9475	1/16/01	Japan			X
	AQ	2002-20806	1/23/02	Japan			X
	AR						
	AS						
	AT						
	AU						
	AV						
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	AW						
	AX						
	AY						
	AZ					<input type="checkbox"/> Additional References sheet(s) attached	
Examiner					Date Considered		
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							